

Additional Information on Ecological Concerns Surrounding the 903 Pad Remediation
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At the August 2, 2000, meeting of the RFCA Focus Group, several questions were raised regarding information provided in the white paper entitled "Ecological Concerns Surrounding the 903 Pad Remediation. These questions had to do with the potential for consultation with the U.S. Fish and Wildlife Service in the case where Preble's mouse habitat was affected by the remediation, and some of the specific considerations surrounding revegetation following a removal or regrading action.

Rocky Flats Field Office staff re-examined the relationship between soils containing greater than 35 pCi/g Pu, and known or potential mouse habitat, and confirmed that the contamination overlaps the habitat, or is sufficiently close such that remediation may affect the mouse's habitat. Either situation would require formal consultation with the Service and an agreement on project approaches that would reduce or mitigate impacts to the mouse. RFFO staff also examined the Programmatic Biological Assessment in which the 903 Pad project is mentioned. In this document, which has been submitted to the Service, no soil action level is specified, nor is an approach to mitigation proposed. Rather, the project is identified as one for which individual consultation would take place if impacts to the mouse were identified during planning.

The goal of consultation with the Service is to plan the project so that impacts to the mouse would be avoided altogether (if possible) or (more likely) to agree on a mitigation strategy, usually through replacing the disturbed habitat in another location. In the case of the mouse, this would involve re-establishing the riparian shrub habitat where the mouse lives. Usually, replacement is done on a one-for-one basis (that is, one acre of new habitat for each acre destroyed). Replacement habitat would be monitored for several years to ensure success. Consultation with the Service in this type of project would likely take several months, although most of this work could be done during project planning. Formal approval from the Service (in the form of a Biological Opinion) would need to be secured before any actions with the potential to affect the mouse could be undertaken.

RFFO staff also examined more closely the amount and type of grassland habitat that would be affected by a removal action down to 35 pCi/g, and developed an independent cost estimate for revegetation. A removal action to 35 pCi/g would disturb about 31 acres more land than a removal to Tier II action levels (about 110 pCi/g). Of this, about 11 acres is undisturbed mesic grassland, and 16 acres is reclaimed grassland. Revegetating this grassland would cost a little more than \$18,000 per acre, so the additional cost for revegetating the 31 acres in question would be about \$560,000. This estimate does not include irrigation if necessary.

Several factors combine to make revegetation in the vicinity of the 903 Pad challenging. Foremost of these is the hot, dry climate, compounded by the fact that most of the land that would need to be reclaimed is on south-facing slopes. Many perennial grassland species, such as blue grama, reproduce through seeds only in very favorable wet years, which may occur once in a decade or less. Thus, techniques like supplemental irrigation may be needed to quickly and reliably revegetate the 903 Pad area with native species. Seeding itself can be difficult, given the fact that different prairie species have widely differing seed sizes and densities, and some seeds require specialized preparation in order to germinate. Finally, finding sources of native seeds can be difficult. The potential follow-on use for the Site as high quality open space, mirroring the natural characteristics of this portion of the Front Range, places an emphasis on doing a good job in revegetation. The potential difficulties in doing so will require consideration in planning the remedy for the 903 Pad.

Enclosed are the several Maps requested at August 2, 2000 meeting that will assist in understanding ecological concerns at the Site (Groundwater plume, Kriging analysis, vegetation, Preble's mouse protection area).